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A new species of *Sebaea* (*Gentianaceae*) from Madagascar

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Summary : *Sebaea condensata* Klack., a new species of *Gentianaceae* from Madagascar, is described and discussed in relation to the other two species of *Sebaea* in Madagascar. A drawing, a map and a key to the Malagasy *Sebaea* are given.

Résumé : *Sebaea condensata* Klack., une espèce nouvelle de Gentianacées de Madagascar, est décrite et discutée par rapport aux deux autres espèces malgaches de ce genre. Une illustration, une carte de distribution et une clé de détermination des *Sebaea* malgaches sont présentées.

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Sebaea condensata Klack., *sp. nov.* — (Fig. 1).

Species haec foliis linearibus et tubo corollae longo ad Sebaeam madagascariensem *accedit sed differt habitu parvo, capsula calycem plus minusve aequans vel eo longior, et inflorescentia uno ramo laterali cymae bene evoluto sed altero condensato cum 1-3 floribus arcte dispositis instructa.*

Herba erecta, parva, 1-15 cm alta. Folia integra, linearia, 5-20 × ca. 1 mm, non amplexicaulia, acuta, uni-(vel tri)nervia. Flores quinquepartiti, actinomorphi, in thyrsis asymmetricis flore apicali in quoque nodo et uno ramo laterali condensato 1-3 floribus instructo, et altero bene evoluto continuationem caulis formanti, interdum ramificatione monopodiali et 1-2 cymis brevibus lateralibus in quoque nodo tum saepe inflorescentia confluenti ; pedicelli brevissimi, < 1 mm longi, erecti. Calyx actinomorphus ; lobi non nisi basi coalescentes, ovati vel elliptici, 2-5 × 1-2 mm, acuminati, carinati vel anguste alati. Corolla tubo angusto longo lobis compluriens longiore, alba sed basi rubra bruneola (fide coll.) ; tubus 4-6 mm longus, in statu fructificanti ad 8 mm ; lobi plus minusve anguste ovati vel elliptici, 1-2 × ca. 0,5 mm, acuti. Stamina filamentis brevissimis ; antherae non exsertae, ovatae, ca. 0,75 mm longae, ad apicem glande grandi. Capsula ovata, 2,5-4 × 2-2,5 mm, calycem plus minusve aequans vel eo longior, apice attenuata, coriacea, septicidale bivalvis. Semina numerosa, minuta, angulata ; cellulae testae parietibus stellatis.

TYPUS : *Perrier de la Bâthie 12564* (holo-, P).

Small erect seemingly unbranched to slightly branched herb, 1-15 cm high, glabrous; branches erect. Stem subterete, 4-lineolate; lines situated ± at equal distance from each other, sometimes with two additional lines below the leaves. Leaves decussate, entire, linear, 5-20 × ca. 1 mm, not amplexicaul, acute, 1(-3)-nerved, herbaceous.

Flowers pentamerous, actinomorphic, in an asymmetrical thyrse with a top flower at each node and with one lateral branch condensed bearing 1-3 flowers and the other well developed forming the continuation of the stem, sometimes with a monopodial ramification and 1-2 short lateral cymes at each node and then often with confluent inflorescence; pedicels very short, < 1 mm long, much shorter than the internodes below, erect. Calyx actinomorphic; lobes only at the very base coalescent, overlapping at the base, ovate to elliptic, 2-5 × 1-2 mm, gradually

tapering at the apex, acuminate, with a few ± prominent parallel veins near the mid-nerve, keeled to narrowly winged. Corolla contorted in aestivation with the petals basally connate forming a long narrow tube several times longer than the lobes, withered long persistent but sometimes eventually deciduous throwing off most of the tube, white but brownish red at the base (*fide* coll.); tube 4-6 mm long, up to 8 mm in fruit; lobes ± upright, ± narrowly ovate to elliptic, 1-2 × ca. 0.5 mm, acute. Stamens inserted in the tube at a distance below the sinuses; filaments very short, free; anthers not exserted and ± cohering to each other in a ring around the style, ovate, ca. 0.75 mm long, with a large gland at the apex. Ovary 2-celled with numerous ovules on axile placentas. Style filiform, shorter than the capsule, straight, not protruding. Stigma entire.

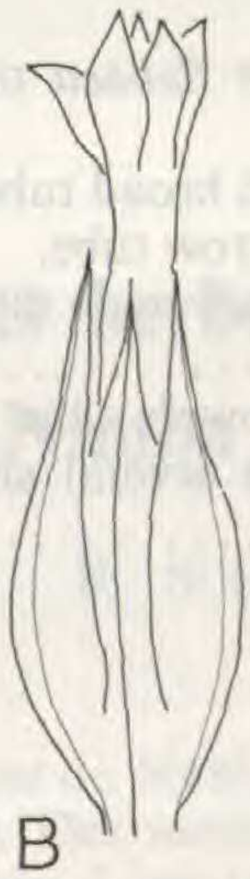
Fruit a capsule, ovate, 2.5-4 × 2-2.5 mm, about as long as or longer than the calyx, attenuate at the apex, coriaceous and septicidally 2-valved; septum partially coriaceous. Seeds numerous, minute, angular; testa cells with star-shaped walls.

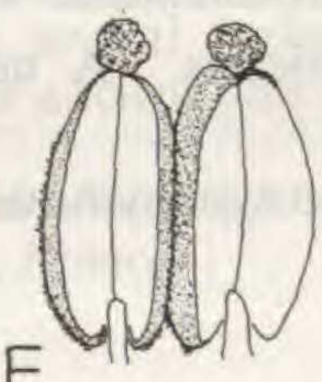
DISTRIBUTION AND HABITAT : *Sebaea condensata* is distributed along the central plateau of Madagascar but also in the very south of the island, and has been collected from near Tananarive in the north to Ambovombe in the south. It grows in open places in sand and has been collected on cliffs and river embankments up to 1200 m altitude. Flowering specimens from April to June.

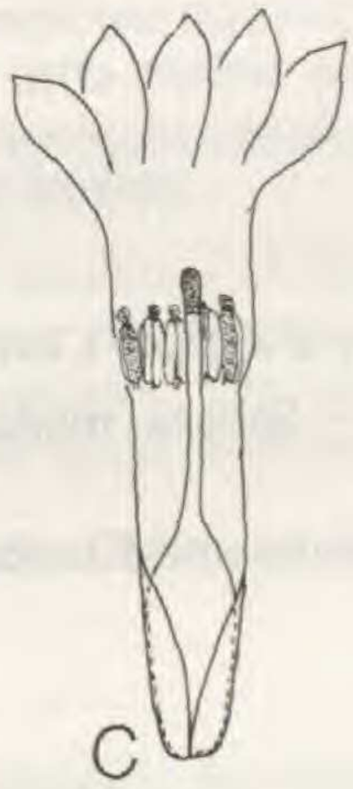
SPECIMENS STUDIED : *Croat 32108*, Prov. Tulear, along route 13 from Betroka to Jct. with route 10 near Ihosy, 800-1000 m, 1975 (MO); *Decary 2707*, Ambovombe, 1924 (P); *Perrier 12564*, Ambatofinandrahana (« Ambatofinandrano »), 1200 m, 1919 (P); *17639*, Tananarive, 1926 (P); *19277*, env. d'Ihosy, 1933 (P).

DISCUSSION

Until now two species of *Sebaea* has been recognized in Madagascar, viz. *S. brachyphylla* Griseb., a polymorphic taxon also widely spread in continental Africa, and the endemic *S. madagascariensis* Klack. (syn. *S. stricta* (Schinz) Schinz, *nom. illeg.*; see KLACKENBERG, 1986). However, in the course of preparing the *Gentianaceae* for the Flore de Madagascar et des Comores, it has become evident that the latter species consists of two separate populations. One of these is found in the salt marshes near and south of Majunga at the west coast. This population includes the type specimen of *S. madagascariensis* collected by HILDEBRANDT near Marovoay, and hence retains this name. The other population has a fairly wide distribution at the central plateau and is sympatric with *S. brachyphylla*. This taxon of the interior is morphologically distinct and here described as a new species, viz. *S. condensata*. *S. condensata* is allied to *S. madagascariensis* but differs by its low habit, usually 5-10 cm high compared to the 20-25 cm high *S. madagascariensis*. Furthermore, while *S. madagascariensis* at each node has only one flower, i.e. the top flower, *S. condensata* is seemingly furnished with two or more flowers at each node. This is due to the fact that in *S. madagascariensis* one (rarely both) lateral branch of the cyme is well developed with a long internode forming the continuation of the stem while the other is totally suppressed. On the contrary, in *S. condensata* both lateral branches are developed but one of them is condensed bearing the flowers closely set to each other near the node. Sometimes, in *S. condensata*, at the lower nodes of the inflorescence, both







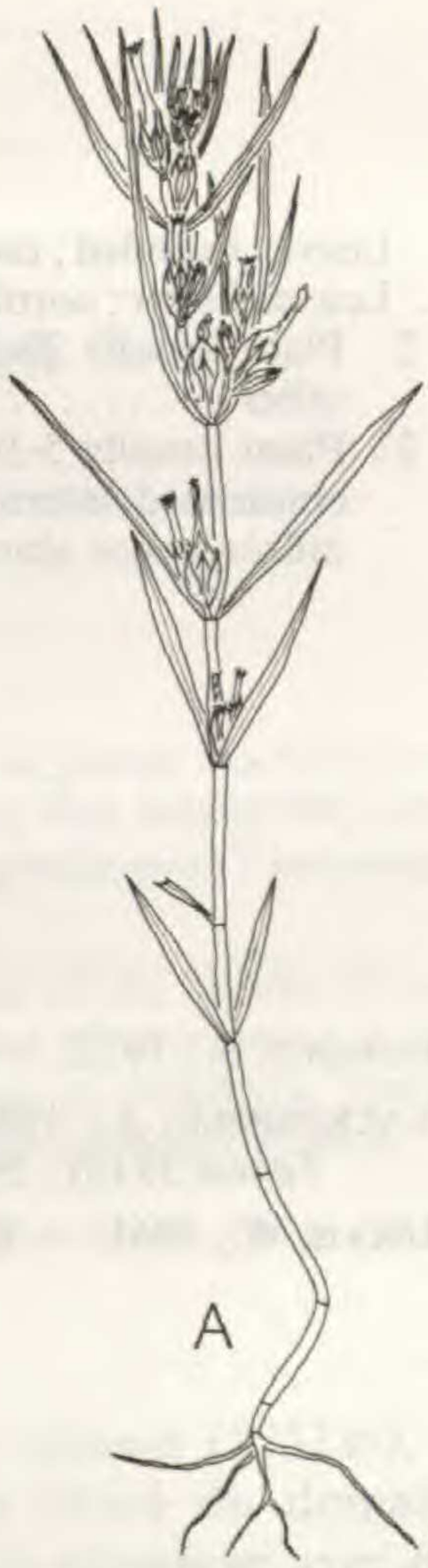


Fig. 1. — **Sebaea condensata** : **A**, habit × 1; **B**, flower × 6; **C**, dissected flower with calyx removed × 6; **D**, flower in fruit with corolla removed; **E**, anthers × 25; **F**, known distribution of **S. condensata** (●) and **S. madagascariensis** (▼). (A-E, *Perrier de la Bâthie 12564*, P).

the lateral branches are developed into short cymes forming a ± confluent inflorescence along the stem. Furthermore, the capsules of *S. condensata* are usually as long as or longer than the sepal lobes but in *S. madagascariensis* they are distinctly shorter.

Both *S. condensata* and *S. madagascariensis* are easily distinguished from *S. brachyphylla* (in brackets) by their white (yellow) flowers, long and narrow (short and broad) corolla tubes, linear (rounded) leaves, and cubical seeds with star-shaped testa cells (spheroidal to ellipsoidal, rectangular in rows with much protruding cell walls).

I agree with MARAIS (1961) followed by BOUTIQUE (1972) in lumping into *Sebaea* R. Br. the two genera *Belmontia* E. Meyer and *Exochaenium* Griseb. *S. condensata* shows most affinity to the latter taxon.

KEY TO THE SPECIES OF *Sebaea* IN MADAGASCAR

1. Leaves rounded ; corolla yellow with a short and broad tube ..... *S. brachyphylla*
1′. Leaves linear ; corolla white with a long and narrow tube.
   2. Plant usually 20-25 cm high ; one flower at each node distantly set and only at the top close to each other ..... *S. madagascariensis*
   2′. Plant usually 5-10 cm high ; two to several flowers close together at each node (top flower plus one condensed lateral cyme), or sometimes with several short lateral cymes forming a ± confluent inflorescence along the stem ..... *S. condensata*

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